

S109535

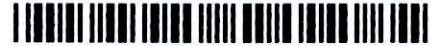


Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

C3-OH

Job Sheet 183093



Part No: C3-OH

Job Qty: 1 ea

Part Name: C-Series Remote Hook 3,000 lbs Lift Capacity



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 9/12/18

Job Tracking No: RA371

Due Date: 9/21/18

Created By: Michelle Gagnon-Donovan

Type: Stock Return

Description: SN: AC12002. Testing required

Note: DWG C3 Rev. 2 IPP Rev. A 18.04.24 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Start up Operation	1 Ea		9/21/18	0.00	0.00	Start Up Small Fab-4		225, 18.09.12
110	Small Fab	1 pcs		9/21/18	0.00	1.00	Small Fab-9		18.08.02
120	QC	1 pcs		9/21/18	0.00	0.00	QC5		
190	Packaging	1 pcs		9/21/18	0.00	0.00	Packaging3-2		
200	QC21-FG	1 Ea		9/21/18	0.00	0.00	QC21		

Part Op
Descriptions: 110 - TEST ASSEMBLY. DISASSEMBLE ASSEMBLY. INSPECT DAMAGE PART.

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
C3-AR	C-Series Remote Hook 3,000 lbs Lift Capacity	1 Ea (1 ea)	100-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Start up Operation	C3	1	1	1

Allocated Container Detail

Qty	Container No	Location	Init
1	S088476	conditional release	

Part Specifications

Specifications could not be found.

Lactite 242 (S186572)

Lactite 620 (S194792)

Saf-T-grease (M138973)

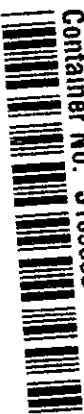
Aeroshell grease No. 7 (S138964)

Plex 9/12/18 11:00 AM Dart.Gagnon.Michelle



Dart Aerospace Ltd.
12710 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 813 832-5206
Email: sales@dartero.com
www.dartaerospace.com

Container No: S109535



Part: C3

Job No: 183093

Serial No/Batch: AC12002

Revision: 2/L

Inspector:

Exp Date:

Instructions:

Date: 08/02/19

Inspection Sheet Complete

RA371

Customer QA Ref #

0

Part Number	Batch / Serial #	Quantity	Part Complete	Rev/CHG Current	New Paperwork	New Labels	Disposition	Work order #	Work order instructions
C3	AC12002	1	☒ Yes	☒ Yes	☒ Yes	☒ Yes	STOCK	S088476	Hook came in from Drallim with overhaul completed. Was brought here to validate that overhaul was done accordingly, and proper papers were provided. Only way to validate that overhaul done accordingly is to physically open hook and swivel to confirm everything is done accordingly and perform the proper testing. Note and communicate with Drallim that no test report was provided. C3 hook sn# AC12002 will be stock as loaner in Dart inventory
SWA3-2	AC09032	1	☒ Yes	☒ Yes	☒ Yes	☒ Yes	STOCK	S088477	Swivel came in from Drallim with overhaul completed. Was brought here to validate that overhaul was done accordingly, and proper papers were provided. Only way to validate that overhaul done accordingly is to physically open hook and swivel to confirm everything is done accordingly and perform the proper testing. Note and communicate with Drallim that no test report was provided. SWA3-2 sn# AC09032 will be stock as loaner in Dart inventory
0		0	☐ Yes	☐ Yes	☐ Yes	☐ Yes			
0		0	☐ Yes	☐ Yes	☐ Yes	☐ Yes			

QC Approval: P.D.

Date: 11-Sep-18

Michelle GagnonDonovan

From: Support Eugene
Sent: Tuesday, September 11, 2018 4:42 PM
To: Patrick Duval; Michelle GagnonDonovan
Cc: Wesley Reid; Sylvie Boucher; Jean-Luc Menard; Marcel Daviau; Michael Lee; Support Eugene
Subject: RE: RA371 - Drallim Cargo hook and Swivel overhaul

Hi Pat and Michelle,

RA371 is now in the planning folder.

Thank you,
Jen

From: Patrick Duval
Sent: Tuesday, September 11, 2018 3:03 PM
To: Support Eugene <support.or@dartaero.com>; Michael Lee <mlee1@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>; Michelle GagnonDonovan <mgagnondonovan@dartaero.com>
Cc: Wesley Reid <wreid@dartaero.com>; Sylvie Boucher <sboucher@dartaero.com>; Jean-Luc Menard <jmenard@dartaero.com>
Subject: RE: RA371 - Drallim Cargo hook and Swivel overhaul

RA371 is now in customer support folder.

Jen,
Please advise Michelle when you're done so she can make the work order

Marcel, Mike,
Please see inspection sheet to make sure I got every right.

Pat Duval

From: Patrick Duval
Sent: Tuesday, September 11, 2018 8:25 AM
To: Support Eugene <support.or@dartaero.com>; Michael Lee <mlee1@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>
Cc: Wesley Reid <wreid@dartaero.com>; Sylvie Boucher <sboucher@dartaero.com>; Jean-Luc Menard <jmenard@dartaero.com>
Subject: RE: RA371 - Drallim Cargo hook and Swivel overhaul

Alain has this RA.

As for me this is the first time I hear about it, as per Alain this RA needs to be open to verify the it was assemble properly and preform the necessary load test and return to the customer... is that correct??

Pat Duval

From: Support Eugene

Sent: Tuesday, September 11, 2018 8:04 AM

To: Michael Lee <mlee1@dartaero.com>; Patrick Duval <pduval@dartaero.com>; Support Eugene <support.or@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>; Eric Downing <edowning@dartaero.com>
Cc: Wesley Reid <wreid@dartaero.com>; Sylvie Boucher <sboucher@dartaero.com>; Jean-Luc Menard <jmenard@dartaero.com>; Andrew Tollis <atollis@dartaero.com>
Subject: RE: RA371 - Drallim Cargo hook and Swivel overhaul

It was received by Andrew on June 29, 2018 and the file is in the inspection folder?

From: Michael Lee

Sent: Tuesday, September 11, 2018 7:18 AM

To: Patrick Duval <pduval@dartaero.com>; Support Eugene <support.or@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>; Eric Downing <edowning@dartaero.com>
Cc: Wesley Reid <wreid@dartaero.com>; Sylvie Boucher <sboucher@dartaero.com>; Jean-Luc Menard <jmenard@dartaero.com>
Subject: RE: RA371 - Drallim Cargo hook and Swivel overhaul

Alain may have units in small fab ?

Mike

From: Patrick Duval

Sent: Monday, September 10, 2018 5:36 PM

To: Support Eugene <support.or@dartaero.com>; Michael Lee <mlee1@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>; Eric Downing <edowning@dartaero.com>
Cc: Wesley Reid <wreid@dartaero.com>; Sylvie Boucher <sboucher@dartaero.com>; Jean-Luc Menard <jmenard@dartaero.com>
Subject: RE: RA371 - Drallim Cargo hook and Swivel overhaul

Sorry but I don't have this RA

From: Support Eugene

Sent: Monday, September 10, 2018 4:21 PM

To: Michael Lee <mlee1@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>; Eric Downing <edowning@dartaero.com>; Patrick Duval <pduval@dartaero.com>
Cc: Wesley Reid <wreid@dartaero.com>; Support Eugene <support.or@dartaero.com>; Sylvie Boucher <sboucher@dartaero.com>; Jean-Luc Menard <jmenard@dartaero.com>
Subject: RE: RA371 - Drallim Cargo hook and Swivel overhaul

Good afternoon,

Please be advised that this return is in the inspection folder and parts should be physically with Pat Duval.

Thank you,
Jen

From: Michael Lee

Sent: Friday, September 07, 2018 8:18 AM

To: Jean-Luc Menard <jmenard@dartaero.com>; Sylvie Boucher <sboucher@dartaero.com>
Cc: Marcel Daviau <mdaviau@dartaero.com>; Wesley Reid <wreid@dartaero.com>; Support Eugene

<support.0r@dartaero.com>

Subject: RA371 - Drallim Cargo hook and Swivel overhaul

Good Morning,

Just following up on RA371.

Drallim carried out a mock overhaul on C3 (S/N AC12002) and SWA3 (S/N AC09032).

They were provided to Small Fab in July.

Have we had a chance to open up the items to verify they completed the overhaul correctly ?

Cheers,

Mike



Remote Cargo Hook Test Form

C3

MAKE SURE YOU ARE USING THE CORRECT TEST FORM FOR THE CORRECT SOLENOID!

NEW SOLENOID (152951-001)

Work Order 183093

Customer RA 371

Serial Number AC 12002

Date 2018/09/17

# of Releases	Load (Lbs.)	Release Method	Remarks	Result	Pass/Fail
1	7,500	Static Hold	Hold for two minutes and reduce load to zero	N/A	PASS
10	1,500	Electircal, 25 volts	No "hang ups" permitted	N/A	PASS
2	3,000	Electircal, 22 volts	Current shall not exceed 12.8 A	9.5 A	PASS
2	2,500	Electircal, 22 volts	Current shall not exceed 12.8 A	9.5 A	PASS
2	2,000	Electircal, 22 volts	Current shall not exceed 12.8 A	9.5 A	PASS
2	1,500	Electircal, 22 volts	Current shall not exceed 12.8 A	9.2 A	PASS
2	500	Electircal, 22 volts	Current shall not exceed 12.8 A	9.2 A	PASS
1	3,000	Electircal, 20 volts	Current shall not exceed 11.6 A	8.2 A	PASS
1	3,000	Electircal, 28 volts	Current shall not exceed 16.2 A	11.5 A	PASS
1	3,000	Manual		N/A	PASS
1	3,000	Impact Test	Impact shackle 10x , shall not release	N/A	PASS
1	N/A	Solenoid Ohms	Shall not exceed 1.7-2.0 Ω	1.9 Ω	PASS
1	N/A	Electircal Continuity	Across both wires	N/A	PASS

Test Conducted By: ALAIN PATRY

Technician

Submit

Signature: Sylvie Sanchez

QC 5 Small FAB / QA

HOOK INSPECTION REPORT

MODEL : C3

S/N : AC12002 / RA371

KEEPER SPRING → INSTALLED IN REVERSE WAY

NOTE : SHORT WIRING → MUST BE 12" OUT OF THE
SELENOID COVER

PLACARD → REPLACE WITH USER ENGRAVING
BUT RIVET HOLES SHOULD BE
BLOCK WITH NEW RIVETS.

PARTS NEED REPLACING → C3-3-4 (2) LINK PIN

PARTS NEED PLATING → C3-3-4A (1) LOAD BEAM

C3-12-3 LOCK

C2-3-3 LATCH ROLLER

C2-3-2 LATCH ROLLER PIN

C3-13-4 KEEPER

INSPECTED BY : ALAIN PATRY

2018/09/17



Remote Cargo Hook Test Form

C3

MAKE SURE YOU ARE USING THE CORRECT TEST FORM FOR THE CORRECT SOLENOID!

NEW SOLENOID (152951-001)

Work Order OH 183093

Customer RA 371

Serial Number AC 12002

Date 2019-8-2

# of Releases	Load (Lbs.)	Release Method	Remarks	Result	Pass/Fail
1	7,500	Static Hold	Hold for two minutes and reduce load to zero	N/A	<u>Pass</u>
10	1,500	Electircal, 25 volts	No "hang ups" permitted	N/A	<u>Pass</u>
2	3,000	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.9</u> A	<u>Pass</u>
2	2,500	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.8</u> A	<u>Pass</u>
2	2,000	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.7</u> A	<u>Pass</u>
2	1,500	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.6</u> A	<u>Pass</u>
2	500	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.6</u> A	<u>Pass</u>
1	3,000	Electircal, 20 volts	Current shall not exceed 11.6 A	<u>7.8</u> A	<u>Pass</u>
1	3,000	Electircal, 28 volts	Current shall not exceed 16.2 A	<u>11.2</u> A	<u>Pass</u>
1	3,000	Manual		N/A	<u>Pass</u>
1	3,000	Impact Test	Impact shackle 10x, shall not release	N/A	<u>Pass</u>
1	N/A	Solenoid Ohms	Shall not exceed 1.7-2.0 Ω	<u>1.7</u> Ω	<u>Pass</u>
1	N/A	Electircal Continuity	Across both wires	N/A	<u>Pass</u>

Test Conducted By:

Michel Lelonde

Technician

Submit

Signature:

Sylvie Sanchez
QC / Small FAB / QA



Remote Cargo Hook Test Form

C3

MAKE SURE YOU ARE USING THE CORRECT TEST FORM FOR THE CORRECT SOLENOID!

NEW SOLENOID (152951-001)

Work Order OH 183093

Customer RA 371

Serial Number AC 12002

Date 2019-8-2

# of Releases	Load (Lbs.)	Release Method	Remarks	Result	Pass/Fail
1	7,500	Static Hold	Hold for two minutes and reduce load to zero	N/A	<u>Pass</u>
10	1,500	Electircal, 25 volts	No "hang ups" permitted	N/A	<u>Pass</u>
2	3,000	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.9</u> A	<u>Pass</u>
2	2,500	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.8</u> A	<u>Pass</u>
2	2,000	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.7</u> A	<u>Pass</u>
2	1,500	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.6</u> A	<u>Pass</u>
2	500	Electircal, 22 volts	Current shall not exceed 12.8 A	<u>8.6</u> A	<u>Pass</u>
1	3,000	Electircal, 20 volts	Current shall not exceed 11.6 A	<u>7.8</u> A	<u>Pass</u>
1	3,000	Electircal, 28 volts	Current shall not exceed 16.2 A	<u>11.2</u> A	<u>Pass</u>
1	3,000	Manual		N/A	<u>Pass</u>
1	3,000	Impact Test	Impact shackle 10x, shall not release	N/A	<u>Pass</u>
1	N/A	Solenoid Ohms	Shall not exceed 1.7-2.0 Ω	<u>1.7</u> Ω	<u>Pass</u>
1	N/A	Electircal Continuity	Across both wires	N/A	<u>Pass</u>

Test Conducted By:

Michel Lalonde

Technician

Submit

Signature:

Sylvie Bouchet
QC 5 Small FAB / QA

011200

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SEE ATTACHED DEVIATION

REVISIONS				DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION				
1	14-0200	UPDATED TO NEW DRAFTING STANDARDS. CHD P/N'S TO AN & MS NUMBERS.		10/29/2014	DPD	JAG
2	15-0248	C2-1-2 REPLACED W/ 188-FP55-1032-1/4. C3-9-3 REPLACED W/ 188-FP55-832-5/8. ADDED ENGRAVING NOTES & DETAILS.		8/27/2015	DPD	JAG

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			C2-1-1	1	MANUAL RELEASE KNOB	6061-T6		2
		B/O	C2-3-1	2	BEARING DU	BRONZE	(KAMAN #06DU04)	3
			C2-3-2	1	LATCH ROLLER PIN	4340		3
		B/O	C2-3-2-1	2	RETAINING RING	STEEL	Ø5/16 (KAMAN #1400-0031)	3
			C2-3-3	1	LATCH ROLLER	4140/4142		3
			C2-3-3-1	1	LATCH ROLLER DU BEARING	BRONZE		3
		B/O	C2-3-5	2	SPACER	NYLON	(MCMMASTER-CARR #95A06A140)	3
			C2-3-6	1	LATCH	SS 17-4PH		3
			C2-3-8	2	ACTUATOR BUSHING	SINTERED BRONZE	Ø3/4 X 5/8 (KAMAN #SS-1824-20) MODIFIED	3
			C2-3-10	1	LATCH SHAFT	4140/4142		3
			C2-3-11	1	ACTUATOR	SS 17-4PH		3
		B/O	C2-5-1	1	ACTUATOR STOP DOWEL	STEEL	Ø3/16 X 7/8 (MCMMASTER-CARR #90145A509)	2
		B/O	C2-10-1	1	SPRING PIN	S.S.	Ø1/8 X 7/8 (MCMMASTER-CARR #92373A182)	2
		B/O	C2-11-2	2	LOCATING PIN	S.S.	Ø3/16 X 1 (MCMMASTER-CARR #90145A510)	2
		B/O	C2-14-2	2	LABEL RIVETS	18-8 S.S.	NO 4 (MCMMASTER-CARR #91654A106)	N/S
			C3-2-1	1	SIDE PLATE	6061-T6		2
		B/O	C3-3-4	2	LINK PIN	DRILL ROD		3
			C3-3-4-1	4	RETAINING RING	STEEL	Ø1/8 (KAMAN #5100-00125PP)	3
			C3-3-7	1	LINK	Ø1		3
		B/O	C3-3-9	1	ACTUATOR SPRING	SS 304 WIRE	Ø.047 X 8 DENDOFF	3
			C3-4-1	2	LOAD BEAM BUSHING	AL-BRONZE		2
			C3-4-4A	1	LOAD BEAM ASSEMBLY			2
			C3-7-1	1	LOAD BEAM BUMPER	POLYURETHANE		2
			C3-7-2	2	LOCK BUMPER	POLYURETHANE		2
			C3-8-2	1	SOLENOID ASSEMBLY			2
			C3-8-4	1	SOLENOID COVER GASKET	GASKET PAPER		2
			C3-8-5	1	SOLENOID COVER	6061-T6		2
			C3-9-1	1	CLOCK SPRING COVER	6061-T6		2
		B/O	C3-9-2	1	CLOCK SPRING	SS 301	DENDOFF	2
			C3-10-2	1	LOCK SPRING	S.S.		3
			C3-11-1	1	SIDE PLATE-SOLENOID SIDE	6061-T6		2
			C3-12-1	2	LOCK BUSHING	4140/4142		3
			C3-12-2	1	LOCK SHAFT	4140/4142		3
			C3-12-3	1	LOCK	4140/4142		3
			C3-12-4	1	LOCK ROLLER	4140/4142		3
			C3-12-5	1	LOCK ROLLER PIN	4140/4142		3
		B/O	C3-12-6	2	LOCK ROLLER RETAINING RING	STEEL	Ø 3/8 (KAMAN #5100-0037-SPP)	3
		B/O	C3-13-1	2	KEEPER DU-BEARING BUSHING	BRONZE	(KAMAN #06FDU04)	2
			C3-13-4	1	KEEPER	4140/4142		2
		B/O	C3-13-5	1	KEEPER SPRING	303 S.S.	DENDOFF	2
		B/O	CORD GRIP	1	CORD GRIP	BRASS	M8-x 1.25 (MCMMASTER-CARR #B183K6)	2
		B/O	EL PLUG M	1	MALE PLUG	PE High Density	(MCMMASTER CARR #7216LS)	2
		B/O	M27500-16TG214	1	WIRE	16 GA SHIELDED WIRE	1 FOOT (AIRCRAFT SPRUCE MIL-C-27500 11-14416)	2
			600.1309	1	LABEL	ALUMINUM		N/S
			600.1309-A	1	LABEL	ALUMINUM		N/S
		B/O	600.1313	1	CAUTION STICKER	VINYL	(SIGNS NOW)	N/S
		B/O	188-FP55-832-5/8	4	CLOCK SPRING COVER SCREW	S.S.	8-32 X 5/8 (MCMMASTER-CARR #92210A194)	2
		B/O	188-FP55-1032-1/4	2	SET SCREW	S.S.	10-32 X 1/4 (MCMMASTER-CARR #94355A330)	2
		B/O	AN4-16A	3	SCREW	STEEL	1/4-28 X 1-7/8	2
		B/O	AN4-17A	1	SCREW	STEEL	1/4-28 X 1-29/32	2
		B/O	AN6-15A	1	KEEPER SHAFT BOLT	STEEL	3/8-24 X 1.703	2
		B/O	AN960-10	1	WASHER	WASHER	#10	2
		B/O	AN960-10L	2	WASHER	STEEL	#10	2
		B/O	AN960-416	8	WASHER	STEEL	Ø1/4	2
		B/O	AN960-616L	2	KEEPER WASHER LOW PROFILE	STEEL	Ø3/8	2
		B/O	M521044N4	4	LOCKNUT	STEEL	1/4-28	2
		B/O	M521083N3	2	SELF-LOCKING NUT	STEEL	#10-32	2
		B/O	M521083N6	1	KEEPER NUT	STEEL	3/8-24	2
		B/O	M335266-63	1	SOLENOID COVER SCREW	S.S.	#10-32 X 7/8	2
		B/O	32446	2	22-16 AWG KNIFE CONNECTOR	(ALLIED ELECTRONICS 32446)		2
		B/O		1	HEAT SHRINK TUBE	RUBBER	(MCMMASTER-CARR #2595K72)	N/S

S190045

S168898

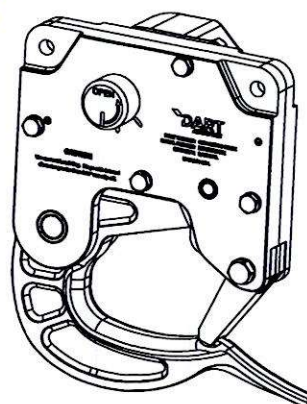
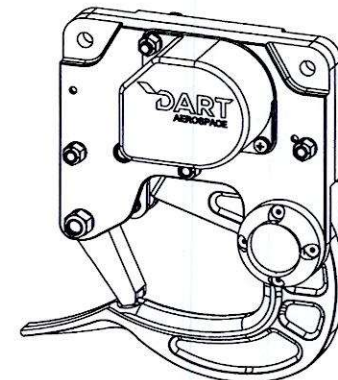
S118503
S137712

S180680
S153419

S185425

S146022
S029491
S075144

S196530
S142051
S180294
S074909



NOTE:

△ FOR REBUILD ONLY.

△ FOR CUSTOMER REBUILD ONLY.

DART AEROSPACE	
C3 HOOK ASSY	
TITLE	
DWG NO.	C3
MATL	DRAWN BY: <i>D Weil</i>
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES XXX ± .005 FRACTIONS ± 1/8 XX ± .01 ANGLES ± 1° X ± .1 OR .01SR	APPROVED REAT USAT FINISH SPEC
1. BREAK ALL SHARP EDGES .015 x 45°	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE 1:3	DATE
SHEET 1 OF 3	